

The Influence of Product-brand Web Sites on Attitudes toward Brand Image

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Abstract

A web site focused on a specific product brand so called product-brand web site has become one major marketing tool as such product-brand web site provides chances for customers to experience the detailed information of the specific brand as well as emphatic the image of the brand. The purpose of this research is to examine the influence of the product-brand web site on the formation of attitude toward the product brand. Subjects of this study are users of two web sites of leading sanitary product brands. The result shows that not only emotion, playfulness and convenience perceived from the web site but also existing attitude toward the brand influence the attitude toward the web site. Further, the attitude toward the web site in turn affects attitude toward the image of the brand. The importance of this study is in its conceptualization and empirical verification of the relationship between the product-brand web site and the reputation of a brand.

Keywords : Product Brand Web Site, Brand Image, Brand Attitude

1. Introduction

Today's socio-economic trend toward matured information society leads ubiquitous usage of digital media. Various types of web site such as corporate web sites, community web sites, and social network web sites are at the core of such advanced media. Internet with dual properties as of communication channel and the marketing medium provides opportunities both for information search and entertainment. In addition, Internet also provides opportunities fundamental changes in management practices especially in advertising.

The purpose of commercial web sites is drawing attention or selling tangible or intangible products. When users reach a web site through search engines and banners, users tend to show various patterns of behavior with regard to the advertisement or product brand [Kim, 1999]. At an early stage of Internet advertisement, Internet is considered as a media which can be used to measure accurate advertising effects [Gibson and Stan, 1997]. Major methods of Internet advertising measure were the click rates and click through rates. However, we began to recognize that the measurement of Internet advertising effect is considerably difficult due to problems in web robot activities and fluid IP addresses [Taylor, 1997].

One of the relatively newly introduced types of web site with commercial objectives is the product brand web site, which focus on a specific product brand rather than on a product in general or on the corporate-wide features. Although

Internet advertisement studies have been dealt with several types of advertisement including banners, there has been lack of study which focused on the examination on the workings of product brand web sites. This paper attempts to analyze the influences of different factors on the attitude toward product brand web site and the effect of product brand web site on the attitude toward the product brand itself.

2. Research Background

2.1 Brand Equity Theory

A strong brand reputation is one valuable intangible asset for a company [Clark, 2002; Keller, 2008; Keller and Lehmann, 2003]. The definition of a brand according to David Ogilvy, the founder of world famous advertising consultancy quotes "Brand is a complex symbol. It is an intangible aggregate of product attributes, name, packaging, price, history, reputation of product, and the method of advertisement." Brand is formed by a close relationship among specificity of a product, perception, experience, trust, and emotional responses. For this reason, a brand reflects an integrated impression of consumers on a product. Brand delivers the ideas and will of a company to customers. Furthermore brand plays the role of a medium of continuous relationship with customers centered on properties of a product. Brand is related to marketing activities linked to the three parties—consumer, supplier, and distribution channel as shown in <Table 1>.

〈Table 1〉 Relationship between Brand and Marketing Activities

Consumer aspect	<ul style="list-style-type: none"> • Means of purchasing activity • Consumer experience • Trust in product/service
Supplier aspect	<ul style="list-style-type: none"> • Support communication with consumer • Offer of means of competition • Enhanced brand royalty via repeated purchasing
Distribution channel aspect	<ul style="list-style-type: none"> • Guaranteed brand sale • Contribution from the improvement of store image • Enabling premium price

Brand equity has been defined differently across researchers. Aaker [1996] defines brand equity as a set of assets (and liabilities) linked to a brand's name and symbol that adds to (or subtracts from) the value provide by a product or service to a firm and/or that firm's customer. Keller (1993) defines brand equity as the differential effect of the brand knowledge on consumer response to the marketing effort of the brand. Similarly, Yoo and Donthu [2001] define brand equity as consumer's different response

between a focal brand and unbranded product when both have the same level of the marketing stimuli and product attributes.

Several attempts have been made to identify and measure dimensions of brand equity. Aaker [1991] proposes that brand equity consists of five dimensions; brand royalty, brand awareness, perceived quality of product, brand association, and image of other dominant brand <Figure 1>. These dimensions help companies maintain a high level of brand preference from customers. Brand equity in turn makes consumers better understand advantages of the brand and create a high level of trust in the brand. Brand equity caused by enhanced brand royalty from customers' satisfaction with the use of the brand also makes marketing program more efficient [Rajeev et al., 1996].

According to Keller [1993], brand image and brand awareness constitute brand equity. He also suggests that brand awareness involves



〈Figure 1〉 Factors related to Brand Equity [Aaker, 1992]

brand recognition and brand recall, where brand recognition implies the extent to which a person is able to recognize a particular brand out of a set of brands. On the other hand, brand recall is the extent to which a person is able to remember a brand from a given product category [Gill and Jagrook, 2010]. Brand awareness is also related to the rank of the brand in customers' mind, brand dominance, brand knowledge and brand opinion. Brand image is related to brand association within customers' memory. Strong brand association by which consumers effectively recognize differences between a given brand and others, drives high brand royalty and affects the level and quality of brand awareness. Brand image plays an important role when customers process and search information. It also helps customers differentiate brands and affects their purchasing decisions.

2.2 Advertising Attitude Theory

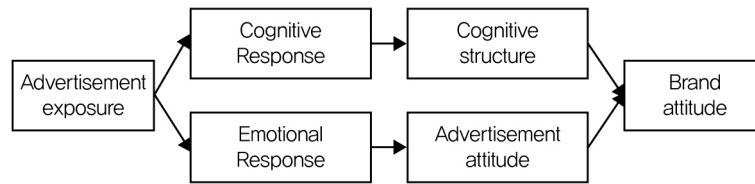
The most widely accepted definition of the concept of advertising attitude is that it is a friendly or unfriendly feeling about a specific advertisement [Lutz, 1985]. Mutual consistency of the two awareness aspects – emotional aspect and behavioral aspect – decide individual behavior. Past research on advertising has focused largely on the effect of advertisement and the emotional aspect.

The concept of advertisement attitude is considered as a very important factor underlying to the brand attitude [Mitchell and Olson, 1981]. Shimp [1981] found that given similar properties among competing advertisement brands, adver-

tisement attitude affects the selection of a brand. Later research shows that when the level of commitment is high, the influence of product information is higher than advertisement attribute [Grander, 1985]. However, Lutz, Mackenzie, Belch [1983] and Gardner [1983] clarified that even in high commitment condition, advertisement attribute affects brand attribute. In general, research supports that there is a high correlation between advertisement attitude and brand attitude.

When consumers are exposed to an impressive message on a brand, they start to develop trust in the property of the brand and a positive attitude to the brand. Mitchell and Olson [1981] proposed that if consumers have a favorable attitude toward advertisement, they will also have a favorable brand attitude. Research on the formation of consumer's attitude as a result of persuasive communication focuses on both cognitive and emotional responses. A cognitive response is the way a consumer processes information provided. This cognitive response affects brand attitude of consumers. Emotional response also affects brand attitude and advertisement attitude. It is a feeling or emotion of consumers in response to an advertisement. While cognition response is a cold response, emotional response is a hot response.

To sum up, the advertisement attitude can be considered to follow two logical tracks. As shown in <Figure 2>, one is the cognitive response which affects brand attitude via cognitive structure, and the other is the emotional response which affects brand attitude through advertisement attitude.



〈Figure 2〉 Brand Attitude Formation [Lee, 2001]

2.3 Product Brand Web Site

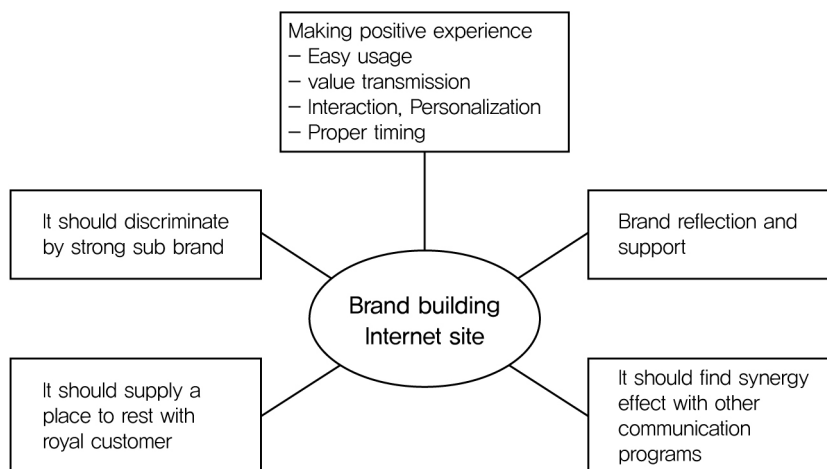
Corporate web sites have various objectives. Companies use web sites as a medium of advertisement for building awareness on-line. User experience on the web is considered to have a strong potential in building brand reputation compared to other medium. Companies can provide an experience to a specified brand by applying information technologies and distinctive property of web sites. Aaker [2001] proposes five ways to build effective product brand web sites. First, a brand web site should be easy to use and should provide positive experience and interaction with users through rich information and customized services. Second, it should reflect core image of a brand by customers. Third,

it should be able to create a synergy effect with the other communication means to build a brand reputation. Fourth, it should contribute to royal customer group. Last, it should be able to distinctively provide interesting contents.

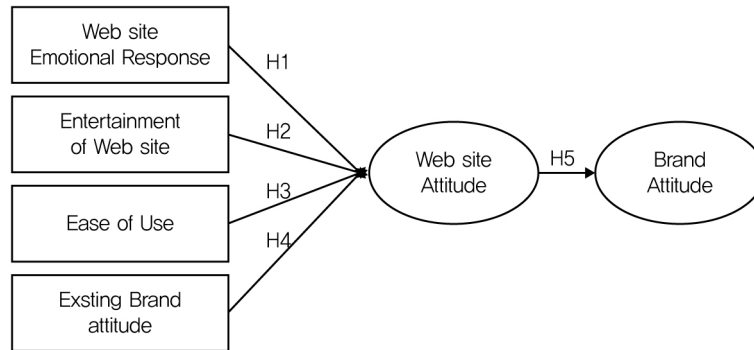
3. Research Method

This study attempts to examine the effects of web site attitude influencing brand image. Based on the prior research on brand equity theory, a set of hypotheses is formulated. 〈Figure 4〉 shows the research model of this study.

The importance of the role of emotion has been consistently highlighted in research on attitude toward advertisement and advertising effects [Mitchell and Olson, 1981]. Lutz [1985]



〈Figure 3〉 Requirement for Effective Product Brand Web Site [Aaker, 2001]



〈Figure 4〉 Research Model

insisted that the determinants of advertisement are not all cognitively based reactions to the advertising stimuli. In the same vein, the direct effects of emotional responses on advertisement are demonstrated by several studies [e.g. Batra and Ray, 1986; Holbrook and Batra, 1987]. Emotional responses are of great importance in the advertising context because emotion can happen quickly at the time of exposure [Zajonc, 1980] and can influence subsequent advertisement processing [Gardner, 1983]. Kim and Leslie [2000] studied whether a unique set of emotions is generated by advertisements for apparel products and brands for young female targets. Also studied were the effects of emotions on evaluative perceptions of apparel brand advertisements attitude. The result showed that two emotional dimensions—pleasure/activation (e.g. activation, bored, desired, social affection) and hypo activation (drowsy, restless, soothed)—had a positive influence on advertising attitude. They also found that domination (anger, fear, irritation, tension) did not have a significant effect on advertising attitude. From the observation explained above, we decide to investigate the relationship between emotional responses to a

brand and the brand site attitude (Hypothesis 1).

H1 : Emotional response of brand web site leads positive effect on the web site attitude.

Past research identifies several factors related to the management of web sites such as the ease of use, product information, entertainment, and trust [Chen and Wells, 1999; Szymanski and Hise, 2000; Donthu 2001; Zeithaml and Parasuraman and malhotra, 2002]. Elliott and Paul [2005] applied the five web site factors (ease of use, product information, entertainment, trust, and currency) that affect consumer attitude to a retail web site. We chose two factors (ease of use and entertainment of web site) to focus on as we believed that these two factors have a direct effect on brand attitude established from web site experiences.

Entertainment involves all web site elements that promote enjoyment while using a site [Elliott and Paul, 2005]. These include sensory and hedonic stimuli, like color, music, auction, and interactivity. Past research suggests that entertainment-related factors (vividness, aes-

thetically pleasing design elements, and engaging material) are positively related to attitude to a web site [Chen and wells, 1999; Coyle and Thorson, 2001; Donthu, 2001; Kwon et al., 2002; McMillan et al., 2003]. Entertainment also appears to increase attitude to online shopping [Javenpaa and Todd, 1997; Vijayasarathy and Jones, 2000], intention to shop online [Lynch et al., 2001], frequency of online purchases [Korgaonkar and Wolin, 1999], and e-loyalty [Childers et al., 2001]. In this study, we investigate the relationship between entertainment of web site and web site attitude (Hypothesis 2).

H2 : Entertainment of brand web site leads positive effect on the web site attitude.

Ease of use means uncluttered screens, clear organization, logical flow, and ease of navigation. In short, it means a web design that facilitates one's efficient and effective use of the site [Elliott and Paul, 2005]. Ease of use is considered to improve the attitude toward the site. So, we investigate the relationship between web site ease of use and web site attitude (Hypothesis 3).

H3 : Ease of use of brand web site leads positive effect on the web site attitude.

A number of previous studies have investigated determinants of brand website usage. Variables such as internet experience, goal-directedness and type of motivation (entertainment/information) have been found to influence consumer behavior on a given web page. Thor-

bjornsen and Helge [2004] revealed that brand loyalty is a much stronger determinant of web-site usage than conventional determinants such as internet experience and type of motivation for the site. Specifically, a study by Supphellen and Nysveen [2001] found corporate brand loyalty to be a strong predictor of both attitudes towards the site and intentions to revisit the site.

H4 : Existing attitude to the brand has a positive effect on the web site attitudes.

Consumers' attitudes towards a web site (or advertisement) are likely to be conditioned by any prior attitudes towards the brand associated with that web site. Although there is some debate over which of these attitudes (web site/advertisement or brand) the consumer forms first [Brown and Stayman, 1992; MacKenzie et al., 1986], there is no doubt of the presence of relationship. According to brand attitude and advertising literature [Brown and Stayman, 1992; Mackenzie et al., 1986], a positive attitude towards an organization's brand predisposes a positive attitude towards the organization's advertisements and other communications. Bruner and Kumar [2000] suggest that attitude of web site is positively related to attitude toward the brand and purchase intent. Based on the Bruner and Kumar's research following hypotheses is formulated.

H5 : Attitude to the brand web site has a positive effect on the brand attitude.

4. Research Results

4.1 Data Collection and Validation

We chose two female sanitary product web sites as the samples of our study, because these sites are considered to have a high level of commitment and are two dominant brand sites in the product category. An empirical study is conducted on 617 female site users in Korea. Most of the respondents are in their teens and show considerably high level of commitment on the use of the selected female sanitary products. For the collection of data, we sent e-DM to users of two sites and collected data were analyzed using SPSS 18.0.

<Table 2> Summarizes the Demographical Characteristics of the Subjects Including Gender, Age, Internet Usage History, and Internet Usage Frequency.

<Table 2> Property of Survey Respondent

Item	attribute	Frequency	Rate
Gender	Male	0	0
	Female	617	100
Age	under 20	266	43.1
	21~25	189	30.6
	26~30	81	13.1
	31~35	62	10.1
	Over 36	19	3.1
Internet	Under 1 year	56	9.0
Usage History	1~2 year	71	11.5
	2~3 year	165	26.7
	3~5 year	244	39.5
	Over year	81	13.1
Internet Usage Frequency	Every day	501	81.2
	2~3 times a week	105	17.0
	1 time a week	8	1.3
	1~2 times a month	3	0.5

Validity Analysis : Factor analysis identifies three factors in both of the two brand cases consistent to the design of the research : emotional response, entertainment and ease of use. Factors with Eigen values greater than one were extracted <Table 3>.

<Table 3> Factor analysis

question	Brand A			Brand B		
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
	Emotional response	Entertainment	Ease of Use	Emotional response	Entertainment	Ease of Use
comfortable	0.786	0.083	0.283	0.803	0.073	0.094
warm	0.751	0.118	0.163	0.800	0.267	0.162
hopeful	0.743	0.352	0.093	0.748	0.208	0.166
happy	0.730	0.319	0.148	0.712	0.132	0.338
full of artistic effect	0.665	0.293	0.094	0.691	0.297	0.324
enjoyable	0.310	0.733	0.082	0.298	0.636	0.338
interesting	0.144	0.708	0.111	0.142	0.826	0.218
attractive	0.203	0.697	0.319	0.062	0.810	0.136
catch one's	0.108	0.670	0.349	0.375	0.743	0.129
pleasant	0.217	0.644	0.157	0.199	0.732	0.174
cheerful	0.433	0.545	0.061	0.452	0.692	0.035
diversity of side	0.189	0.149	0.738	0.204	0.248	0.749
Fast	0.017	0.116	0.694	0.244	0.084	0.711
neat design	0.274	0.121	0.666	0.128	0.423	0.627
detailed explain the characteristic of product	0.126	0.273	0.554	0.312	0.290	0.482

Reliability analysis : We used values of Cronbach's α to measure reliability of each construct. As <Table 4> indicates, since all of Cronbach's alphas of the constructs are above 0.6605, we believe that the reliability of the variables is acceptable to for further analysis.

<Table 4> Reliability Analysis

Variable	Number of Item	Cronbach's α	
		Brand A	Brand B
Emotional response	5	0.8520	0.8897
Entertainment of web site	6	0.8136	0.8768
Ease of use	4	0.6605	0.6978
Existing brand attitude	2	0.7691	0.8043
Web site attitude	2	0.8153	0.8785

4.2 Results of Hypothesis Tests

We examined hypothesis of the research model using regression analyses. We first analyzed the regression on web site attitude, and then analyzed the influence of the product- brand web site on brand image.

Dependant Variable : Web Site Attitude

The analysis between web site experience and web site attitude is expressed in the following regression formula.

$$Y = \alpha + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \beta_3 \cdot X_3 + \beta_4 \cdot X_4 + \varepsilon$$

Y : Web Site Attitude

α : Constant

$\beta_1 + \beta_2 + \beta_3 + \beta_4$: Regression coefficient

X_1 : Web site emotional response

X_2 : Entertainment of web site

X_3 : Ease of use

X_4 : Existing brand attitude

ε : Residual

<Table 5a> and <Table 5b> shows the result of regression analysis between web site experience and web site attitude as per each brand. Significance levels of the variables in both brand A and B are 0.000($p < 0.05$). Therefore, we conclude that both of the two variables are statistically meaningful.

<Table 5a> Results of Regression of Brand A (* $p < 0.05$)

Brand	Variable	Non-standard coefficient		Standard efficient	t value (sig)	F value
		β coefficient	Standard error			
A	Constant	-0.203	0.189		-1.074 (0.283)	100.767 (0.000)*
	Web site emotional response	0.174	0.045	0.158	3.885 (0.000)*	
	Entertainment of web site	0.398	0.052	0.319	7.633 (0.000)*	
	Ease of use	0.320	0.053	0.226	6.092 (0.000)*	
	Existing brand attitude	0.107	0.029	0.122	3.701 (0.000)*	

<Table 5b> Results of Regression of Brand B (*p < 0.05)

Brand	Variable	Non-standard coefficient		Standard efficient	t value (sig)	F value
		β coefficient	Standard error			
B	Constant	-0.278	0.148		-1.888 (0.060)	158.751 (0.000)*
	Web site emotional response	0.390	0.043	0.343	9.017 (0.000)*	
	Entertainment of web site	0.335	0.042	0.289	8.066 (0.000)*	
	Ease of use	0.208	0.052	0.150	3.984 (0.000)*	
	Existing brand attitude	0.106	0.025	0.126	4.196 (0.000)*	

Web site attitude is significantly affected by emotional response, entertainment, and ease of use of the web site. Significance levels of emotional response were 0.000 ($p < 0.05$) in both brand A and B. Thus, we interpret that as more users have a good emotional response to the web site, they will have more positive attitudes towards the website (Hypothesis 1 is supported).

Significance levels of brand web site entertainment variable are 0.000 ($p < 0.05$) in both brand A and B, therefore hypothesis 2 is strongly supported. Entertainment-related factors are found to be positively related to attitude toward of web sites.

Hypothesis 3 and Hypothesis 4 are also strongly supported as significance levels of ease of use of web site variable are 0.000 ($p < 0.05$) in both brand A and B. If brand web site is convenient to use, users are comfortable in using the web site, and then they will form a good brand attitude. Also, consumers' attitudes towards a web site are likely to be conditioned

by prior attitudes towards the brand associated with that web site.

The result clearly shows that emotional response, entertainment, and ease of use have a positive relationship with web site attitude, and existing brand attitude also affects web site attitude.

Dependent Variable : Brand Attitude

The analysis between web site attitude and brand attitude is based on the following regression formula. Results are presented in <Table 6>.

$$Y = \alpha + \beta_1 \cdot X_1 + \epsilon$$

Y : Brand Attitude

α : Constant

β_1 : Regression coefficient

X_1 : Web Site Attitude

ϵ : residual

〈Table 6〉 The Results of Regression (*p < 0.10, **p < 0.05, ***p < 0.01)

Brand	Variable	Non-standard coefficient		Standard coefficient	T value (sig)	F value
		β coefficient	Standard error			
A	Constant	0.823	0.123	–	6.682 (0.000)***	414.913 (0.000)***
	Web Site Attitude	0.740	0.036	0.635	20.369 (0.000)***	
B	Constant	0.695	0.092	–	7.553 (0.000)***	687.092 (0.000)***
	Web Site Attitude	0.764	0.029	0.726	26.212 (0.000)***	

Significance levels of web site attitude variable are 0.000 ($p < 0.01$) in both brand A and B; thus, hypothesis 5 is strongly supported. The result implies that user experience on a web site affects brand attitude of the users. Companies have sufficient reason to make full use of brand web site as a marketing tool for the formation and enhancement of brand attitude.

5. Conclusion

A strong brand is among the most valuable intangible assets for any company. The importance of the value of brand is expected to further increase in the future. Therefore, the formation and enhancement of brand equity is vital for the success of a company. The importance of this study is its conceptualization and test of the relationship among antecedents, precedents of the experience with product-brand web site and the brand image. This research empirically examined the influence of the use of product-brand web site on the formation of brand image.

The result of this research indicates that the experience with product-brand web site has a positive influence on the attitudes of product brand web site. User experiences and attitudes with brand website are closely related to emotional response, entertainment, and ease of use of web site. Attitude toward the brand website in turn affect attitude toward the brand itself.

We find that brand website plays an important role as a marketing tool which affects brand image thanks to the widespread diffusion of internet. Corporate web is a medium related to economic activities. And brand web site which focuses on a specific brand plays an important role in the formation of brand attitude. The result implies the emergence of new opportunities to improve brand attitude by way of using product-brand web site. Company should understand that brand web site is not just a new communication medium, but it is also a critical tool for strategic enhancement of brand equity.

Although careful attention was paid in the design and implementation of the research,

there are some sampling considerations for future research. We focused only on female subjects as we chose female users of sanitary product website, which is considered to draw a high level of commitment and a strong sense of community. Future studies should include various product brand site for comparison and male subjects for a more externally valid conclusion.

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